

CONTROL SYSTEM PARAMETER MONITOR

Abstract

A control system parameter monitor determines a difference between a desired and estimated or measured parameter value, applies a weighting factor to the difference, and selects a control strategy based on the weighted difference. The weighting factor generally reflects the confidence in the accuracy of the parameter value determined by the parameter monitor. The weighting factor may be determined based on one or more engine or ambient operating conditions or parameters, or based on statistical analyses of monitor values and/or control system parameter values, for example. In one embodiment, an engine torque monitor for an electronic throttle control system uses percent torque deviation and rate of change to select an appropriate weighting factor and determine whether a deviation between desired and estimated or measured torque selects an alternative control strategy.